

mendations, with a view to making proposals in the form of appropriate OECD instruments and a draft international agreement before the end of 1987.

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SECOND ANNUAL MEETING OF THE WORLD COUNCIL FOR THE BIOSPHERE (WCB) AND JOINT PLANNING SESSION WITH THE INTERNATIONAL SOCIETY FOR ENVIRONMENTAL EDUCATION (ISEE), HELD AT THE HÔTEL SONLOUP, 1833 LES AVANTS SUR MONTREUX, VAUD, SWITZERLAND, DURING 18–22 JUNE 1985

This dual event was mainly crammed into the three days of June 19–21 and involved three interlinked concerns, namely WCB, ISEE, and their Joint Coordinating Committee (JCC). This last consists of the Councillors of WCB, the officers of ISEE, and the Secretary-General and Deputy Secretary-General of the first two organizations, but did not hold separate sessions on this occasion. There were also invited guests and temporary visitors, some of whom submitted written contributions when their personal attendance at short notice proved impracticable, and accompanying persons for whom excursions were provided by the sponsoring Foundation for Environmental Conservation. In all there were involved more than 50 persons from five continents represented by thrice as many countries.

First came the business meetings of WCB and ISEE, which were held to some extent jointly and involved a quorum of their JCC. They commenced with an historical review of the origins of the twin-sister bodies: WCB had grown out of a proposal, made in 1977 in the headquarters of the above sponsoring Foundation, of an 'International Year of The Biosphere', and ISEE had been a natural outcome of the need to coordinate the activities of regional and national societies for environmental education, which were soon found to be springing up practically all over the world. Considered thereafter were the ISEE workshops which had already been held in India and Canada, and incipient plans for others which it seemed desirable to hold in a succession of different countries in order to stimulate the widest possible interest and following.

Decisions and understandings mainly of the first day-and-a-half of deliberations included the following:

- 1) Although our individual actions are commonly local, involving small parts of The Biosphere's vast whole, WCB's thrust should be in a global context, towards a much-needed *world environmental strategy*. Each and every part of The Biosphere is important to its global integrity, and realization of this fundamental truth, with concomitant action, should lead to responsible stewardship for ultimate collective survival.
- 2) Through wise choice and productive functioning of Councillors, WCB should be able to influence decision-makers suitably—both directly and through curricular advice to ISEE and other bodies.
- 3) Means should also be sought to maintain a professional Secretariat with at least one Salaried officer, some half-a-million US dollars being needed for this and other early developments.
- 4) The Councillors of WCB should be as widely representative of different interests, talents, 'worlds', sexes, and subjects, as possible within the limits of a currently-sanctioned 16.
- 5) Relationships with other nongovernmental and inter-governmental organizations should be considered very carefully, including some suggested affiliations. Affiliates should be empowered to nominate Councillors.
- 6) Three truths to be borne always in mind are that humans are an integral part of The Biosphere, their ever-increasing population is our basic problem, and their education our hope for the future.
- 7) It was decided to establish a Board of Finance, consisting of not fewer than five Patrons or Trustees on four-years' terms, renewable thereafter, to secure funds for development on full establishment and due registration, with revised and agreed constitutions of WCB, ISEE, and their JCC. Policy issues should remain primarily with WCB and implementation with ISEE.
- 8) WCB functions should be to serve as an international forum to (a) alert decision-makers of environmental threats, (b) monitor the sustainability of ecobiomes and major ecosystems, (c) support the World Campaign for The Biosphere as a global educational effort, and (d) advise ISEE on those and other mutually-agreed themes (*see below*).
- 9) Wider and improved use should be made of the popular media—including newspaper columns and television—to put our concern and guidance over to the general public, including the basic importance of overdue limitation of human population.
- 10) Possibilities of registration of WCB–ISEE in Switzerland should be explored, provided the Secretariat offices could be elsewhere if expedient.
- 11) Such vital appointments as those of Secretary-General and Deputy Secretary-General should be made by the JCC and be for the limited but indefinitely renewable periods of three years for the former and two years for the latter.
- 12) The functioning of ISEE being different in different countries, and often through their Ministries of Education, these circumstances and natural customs and preferences should always be borne in mind, *inter alia* by WCB when making recommendations.
- 13) Secretariat functions should include (a) organization of at least annual meetings, (b) being available for consultation and advice, (c) coordination of WCB, ISEE, and their JCC, (d) developing proposals and fostering projects, and (e) encouraging Patrons and other donors.
- 14) Tangible initiatives of WCB should include (a) exploration of the limits and validity of crucial assumptions underlying predictions, and sensitivity of models to those assumptions, (b) fostering a film of Earth's main ecobiomes, and (c) fostering a film e.g. on pesticides, population, and pollution.
- 15) Tangible initiatives of ISEE should include (a) maintenance of a world-wide registry of consultants on environmental education, (b) evaluation of other bodies' pertinent projects, (c) production of a brochure and curricula for schools, etc., (d) effective use of mass media, and (e) celebration of 'Tbilisi plus ten' with workshops and a major conference on global environmental education.
- 16) Elected as Councillors of WCB were H.H. Fatesingh-rao P. Gaekwad of Baroda and Professor Victor

A. Kovda, respectively of India and the USSR, and making 11 in all.

Meanwhile ISEE adopted the following Statement of Mission and Objectives:

1) *Mission*

The International Society For Environmental Education (ISEE) is an association of individuals and organizations engaged in the practice of environmental education, communication, and research, to promote ecologically sustainable development. The ISEE seeks to increase the effectiveness of environmental educators in fostering and understanding of The Biosphere and the concepts, skills, and attitudes, needed by an environmentally competent global citizenry. To achieve this mission, the following objectives are set forth:

2) *Objectives*

- to increase awareness of The Biosphere and of global development issues;
- to establish a network of environmental educators;
- to promote research and communication related to environmental education;
- to promote and conserve social, cultural, and ecological diversity;
- to foster communication between conservation and development interests;
- to incorporate environmental concerns in developmental decision-making; and
- to coordinate the activities of ISEE in a supportive and complementary manner with other organizations interested in environmental education.

Of twenty-three themes introduced to sessions of the joint bodies at our behest by the named individuals and duly discussed, the following (in no particular order) were decided on as desirable priorities for inclusion in, or supplementation of, environmental education curricula as widely as possible in the world:

Geological Foundations of The Biosphere (J.-P. Schaer)
 Biosphere Globes (J.R. Vallentyne)
 Newsletter Publishings (I.R. Holmes)
 The Imperative of Avoiding Nuclear Holocaust (A.H. Westing)
 Biospherical Climatic Trends (R.A. Bryson)
 Biospherical Economics and Political Trends (L.K. Caldwell)
 Expanding Wastelands (J.L. Cloudsley-Thompson)
 The World Conservation Centre's Environmental Initiatives and Prospects (D. Allan)
 Writings on The Biosphere (J. Grinevald and W.G. Berberet)
 The Arctic as a Regional Sea (J.G. Nelson)
 Importance of Maintaining Forests (J.I. Furtado and J.A. Sayer)
 Human Population Effects (S.P. Johnson)
 Education of Industry for Environmental Care (M.G. Royston)
 MAB, Biosphere Reserves, and World Heritage Sites (M. Batisse)
 Limnological Cleanliness (B.E. Edner).

Most of the other topics—introduced verbally or in writing—were deferred, namely those of A.B. Sacks, Ma Shijun, A. King, N. Polunin, G.E. Petts, and J. Piccard. These and the above decisions having been made, the Biospeed Dinner given by the Foundation for Environmental Conservation on the last night turned out to be the concluding event, and the remaining participants departed on the fol-

lowing morning—except for some who remained in the idyllic setting of the Hôtel Sonloup.

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INTERNATIONAL SEMINAR ON METHODOLOGIES TO
 EVALUATE THE PERFORMANCE OF IRRIGATION SYS-
 TEMS, HELD IN THE BARC AUDITORIUM, DHAKA, BAN-
 GLADESH, DURING 25–27 JUNE 1985

Sponsored by the Bangladesh Agricultural Research Council (BARC) in collaboration with Winrock International (formerly International Agricultural Development Services) and the Ford Foundation, the Seminar took place at the BARC Auditorium in Dhaka.

In inaugurating the Seminar, Major-General M.A. Munim, Minister for Agriculture of Bangladesh, pointed out that in terms of the number of people involved, Bangladesh is already one of the major irrigating countries of the world. At present there are more farmers irrigating crops in Bangladesh than in all but a few countries—such as China and India, and possibly Pakistan and Indonesia. In recent years agricultural output in Bangladesh has been expanding at roughly 4% per year, a rate that is marginally higher than the population growth-rate. This favourable performance of the agricultural sector can be attributed to the expansion of irrigation. The total irrigated area in the country has doubled since 1960, and during the past decade the irrigated area has been expanding at an average annual rate of around 6%. Thus, irrigation plays a vital role in agricultural development in Bangladesh.

This means that evaluation of irrigation systems is absolutely essential for a developing country such as Bangladesh. These evaluations should relate to efficient delivery of water, effective use of water, and equitable distribution of the benefits of irrigation. Above all the evaluations carried out must be used to improve the performance of the systems.

Dr K. Azharul Haq, Member-Director of BARC and the organizer of the Seminar, suggested that even though the title of the Seminar is on the performance of irrigation systems, it should be interpreted broadly to include agricultural development aspects as well.

In a thought-provoking paper on why irrigation system performances should be evaluated, Anthony Bottrall, of the Ford Foundation, Dhaka, pointed out that irrigation development is extremely important for developing countries, both economically and politically. The very high level of investment required for the construction and operation of irrigation projects, and the large potential for significant increases in agricultural production, income, and employment, resulting from such projects, clearly indicate their economic importance. Political importance stems from the decision criteria over the allocation of scarce resources at all stages of the development process—funds and selection of sites and command areas at the design stages; funds, materials, and contracts, at the construction stage; or funds and water itself at the operational stage. Mr Bottrall reviewed some of the difficulties facing the evaluators, among which were restrictive terms of reference, lack of